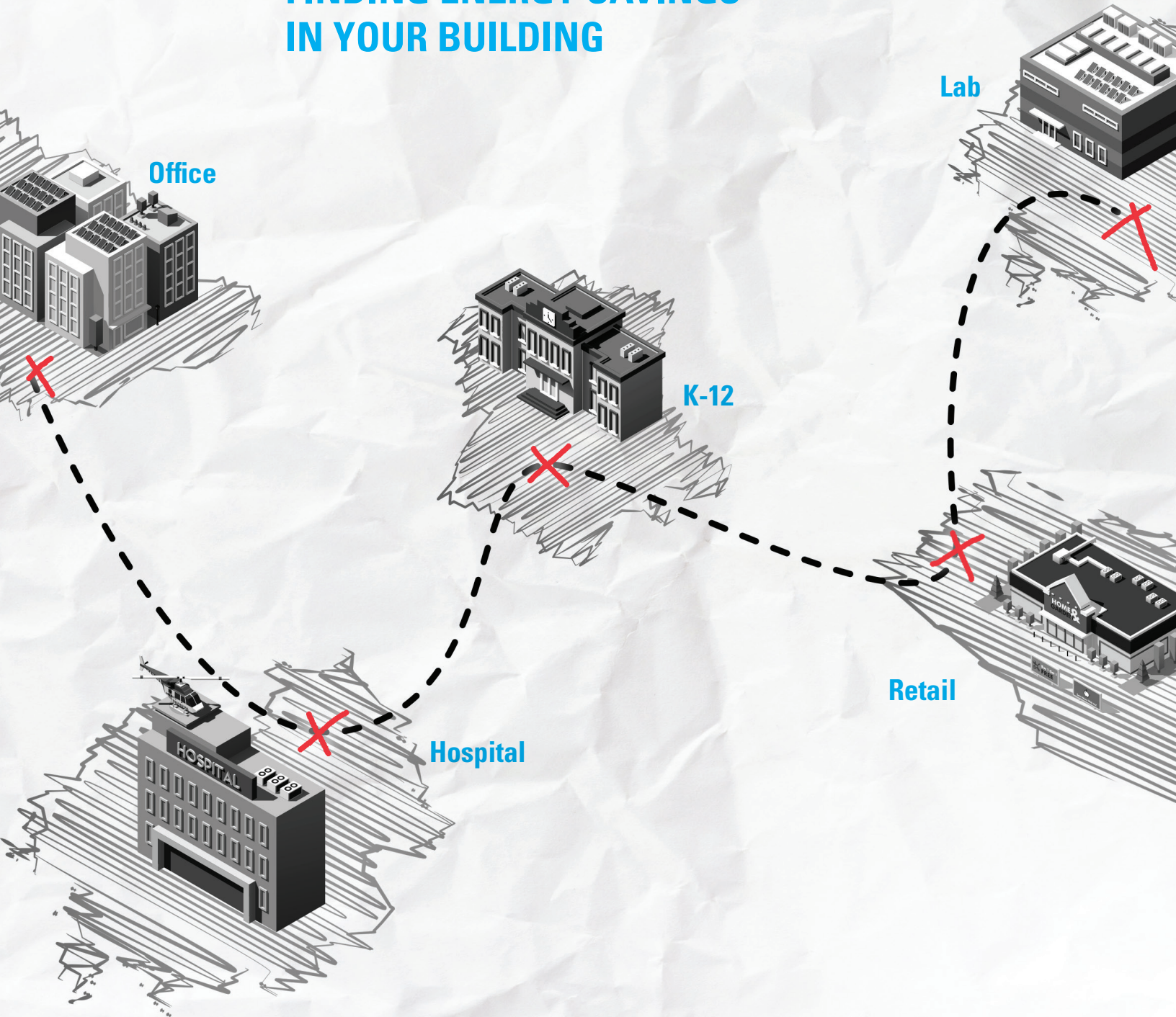




Energy Treasure Hunt

**A HOW-TO GUIDE FOR
FINDING ENERGY SAVINGS
IN YOUR BUILDING**



Energy Treasure Hunt: A How-To Guide



During an Energy Treasure Hunt, groups of people walk around a building looking for quick ways to save energy. Many ENERGY STAR partners have used Energy Treasure Hunts to reduce their facilities' energy use by up to 15 percent.

Treasure Hunts vs. Audits: Two Key Differences

Treasure Hunts focus on quick fixes with a short payback period. Many improvements can be made immediately and without significant expenditures or capital investments.

Treasure Hunts strike a positive, optimistic tone, focusing on outcomes and improving day-to-day operations. And building operators and employees who help “discover” treasure are more likely to take ownership of projects, ensuring their completion.

Let's get started!

SAMPLE RESULTS

Staples, working with Burton Energy Group, deployed the Energy Treasure Hunt at its 500,000 ft² London (OH) Fulfillment Center. Opportunities that were identified and implemented as a result of this Energy Treasure Hunt saved more than 7% of facility energy over 20 months, with a payback period less than 2.5 years.

Since 2015, Bristol-Meyers Squibb has engaged 400+ employees in Energy Treasure Hunts, identifying potential savings of \$11 million, with average identified facility-level savings of nearly 16%. Sharing their success, Bristol-Meyers Squibb helped conduct an Energy Treasure Hunt for OSF St. Joseph Medical Center in Bloomington, IL, resulting in 9 opportunities worth \$206,872, plus 18 more unquantified savings opportunities.

Step 1: Prepare



This is the most time-consuming step, but definitely the most important.

PICK A LOCATION

Begin by evaluating your portfolio of buildings to identify facilities where energy performance needs to improve or has recently declined. Find one that is willing to host an Energy Treasure Hunt.

COLLECT BACKGROUND INFO

Next, work with the building manager to collect:

- ☐ Data on energy use, costs, demand, and trends. Include Portfolio Manager-generated reports on performance.
- ☐ Blueprints, plans, and technical documentation for HVAC, lighting, and other building systems.
- ☐ Maintenance histories for key energy-consuming systems.
- ☐ Reports from past energy audits, assessments, and projects.
- ☐ Reports from the facility's BMS or commissioning documents if available.
- ☐ Information on utility rebates and incentives.

GATHER MATERIALS

Collect any special equipment needed, such as thermal imaging cameras, light meters, voltage meters, etc.

Download the ENERGY STAR Energy Treasure Hunt Detail Sheet at www.energystar.gov/treasurehunt to organize the energy-saving opportunities uncovered during the treasure hunt.

ASSEMBLE TEAMS

Typically, organizations create 1 – 2 teams, each containing about five people. If you have more than one team, divide them either by floor (i.e., floors 1 – 5, floors 6 – 10) or function (i.e., utility areas, workspaces). Each team should have a leader and should include:

- **Building staff and occupants:** Facilities staff, managers, workers, and others who influence energy use.
- **Outsiders:** Corporate energy/sustainability staff, facility staff from other buildings and even energy managers from other organizations. Outside eyes can help spot things the building staff may overlook and bring new ideas.
- **Specialists:** Consultants, equipment manufacturers, contractors, vendors, corporate engineers, and others with technical expertise. These can help to identify and quantify energy and cost savings.

SCHEDULE A MEETING WITH MANAGEMENT

Lastly, schedule time with the building's management for the report-out presentation of findings well in advance of the event. This is key for the success of a treasure hunt since managers will be asked to give initial approval for the hunt, as well as delegate responsibility for project implementation.

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Step 2: Pre-Hunt Meeting

A week or two before the Energy Treasure Hunt, hold a conference call or webinar with team members to organize everyone. Explain that the philosophy of a treasure hunt is to discover operational and low-cost improvements. Be clear that the point of a treasure hunt is not to find problems and place blame, but to identify and quantify energy-saving opportunities in a positive light. Review the agenda, teams, hunt process, and method for evaluating energy-saving opportunities using detail sheets. Describe team members' roles and responsibilities and address any questions that participants may have.

Provide copies of applicable ENERGY STAR Energy Treasure Maps in advance of the hunt to familiarize teams with common energy-saving opportunities in various facility types.

Step 3: Treasure Hunt

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TIMING

Depending on the facility's size and operations, a treasure hunt event may last from one to three days. A treasure hunt usually starts when the facility is either closed or not in operation, such as a weekend or before or after regular operating hours. Exploring a facility when closed to business provides an easy way to identify no-cost operational savings such as machinery that is running during periods when it should shut off.

KICK-OFF MEETING

Gather everyone for a quick meeting to cover:

- Agenda/Schedule
- Safety protocols
- Reminders to focus is on operational, corrective actions, and no- and low-cost opportunities
- How to use the detail sheet
- Quick tour for team members not familiar with the space

SAMPLE AGENDA

Day 1 – Sunday

12 PM: Kickoff meeting

12:30 PM: Group tour

1 PM: Team Treasure Hunting during non-business hours

5 PM: Work on detail sheets.
Summarize findings from this day.

6 PM: Group dinner

Day 2 – Monday

8 AM: Team Treasure Hunting during business hours

12 PM: Lunch

1 PM: Finish detail sheets

3 PM: Findings & group meeting

4 PM: Practice report out

5 PM: Report out to management

THE HUNT

Pass out the treasure maps and release the teams to begin their search. Ask them to address these basic questions:

- Where, how, and how much energy is being used?
- Is energy being used efficiently?
- Can energy use be reduced?

Schedule several hours for quantifying energy savings and completing detail sheets. If a treasure hunt is conducted over several days, set aside time at the end of each day for detail sheet work.

After teams have completed their detail sheets, they should report their findings to the full group for discussion. The group should then prioritize the opportunities based on greatest savings and ease of implementation.

MANAGEMENT PRESENTATION

The final activity of the treasure hunt event is a summary presentation to the building's management to report on findings and recommendations. The summary presentation should cover:

- Energy Treasure Hunt teams and their focus areas.
- Top three opportunities identified by each team, with photos and details.
- List of all opportunities identified.
- List of additional opportunities that may require more capital investment, or opportunities that require more analysis.
- Cost and payback of each recommended measure.
- Energy opportunity summary related to energy savings as a percentage of the facility total energy, energy savings as a percentage of the facility reduction target, overall payback, and CO_{2e} savings reduction illustrated in terms of relatable units such as equivalent emissions due to energy consumption in a home or vehicle.
- Proposed next steps with implementation responsibilities.
- Requests or approvals needed from organization or facility leadership.

For more information and additional resources to support Energy Treasure Hunts, go to www.energystar.gov/treasurehunt.

Step 4: Follow-up

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Within four weeks of the summary presentation, the Energy Treasure Hunt team, together with management, should create an implementation plan. It should:

■ Prioritize Opportunities

Review all opportunities listed in the summary report and prioritize them by considering payback, ease of implementation, and overall control.

■ Detail Plans

Devise detailed plans for moving forward with each of the proposed measures.

■ Outline Roles and Responsibilities

Delegate individuals to each task.

■ Create a Schedule

Attach target completion dates to each measure and determine a frequency (weekly, monthly, quarterly) and format for tracking progress.

■ Communicate Outcomes

Develop publications, e-mails, webinars, visual boards, or other internal communication methods for building awareness of the Energy Treasure Hunt findings among all employees. Keep staff up to date on completion of energy efficiency measures and the savings generated.

■ Schedule Additional Energy Treasure Hunts

Develop a schedule for future Energy Treasure Hunts to support continuous improvement and facilitate planning. Encourage staff to volunteer to participate in upcoming events. Many organizations repeat treasure hunts to ensure energy savings measures are implemented and to uncover additional savings. Some even apply the process to areas such as water and waste.

